

**Iowa Department of Public Health
Occupational Health and Safety Surveillance Program (OHSSP)
Annual Report
July 1, 2009-June 30, 2010**

Fundamental Surveillance Program

The Iowa Department of Public Health (IDPH) Occupational Health and Safety Fundamental Surveillance Program (OHSSP) activities continued to focus on capacity-building activities that support the overall mission and goals of programming within IDPH, while growing the capacity of the OHSSP and building awareness of the importance of incorporating work-related health and safety components into existing public health programs.

Occupational Health Indicators were finalized for 2006* and data were collected or requested for preliminary calculation of the 2007 indicators in compliance to the updated guidelines issued by CSTE in June 2010. Preliminary data analysis of the 2007 data indicates that many state-specific trends continue for Iowa including higher rates per 100,000 employed persons for the crude rate of fatal work-related injuries and higher prevalence and incidence rates among adults with elevated blood lead levels blood of 25 µg/dL or higher.

*Some data still incomplete due to data delays from national sources.

In 2007, Iowa also had a non-fatal occupational injury and illness incidence rate, based on total recordable cases (TRC) of 5.5 per 100 full-time workers, while the USA rate was 4.2 and the average rate of 9 Midwest states (IA, IL, KS, MN, MO, ND, NE, SD, and WI) was 4.8 (U.S. DoL, BLS, Survey of Occupational Injuries and Illnesses 2007 data).

As identified by the IDPH OHSSP Fundamental and FACE program, the top two general areas of work-related traumatic fatalities in can be grouped as farm or agricultural incidents and motor vehicle fatalities. These are also the two areas that include the majority of the older worker fatalities in Iowa. Iowa 2007 work-related fatality percentages exceeded the national and Midwest average percentages for both transportation (IA 58%, US 41%, Midwest average 43%) and contact with an object or equipment (IA 20%, US 17%, Midwest average 19%) as the event or exposure linked to the fatality.

Analysis beyond the basic occupational health indicator (OHI) data of the 2007 CFOI data shows that older workers in Iowa continue to have more traumatic work-related deaths than those across the US. For workers in Iowa, 85% of all work-related fatalities occurred in those workers 35 years of age or older, compared to 72% of all US workers in that age range in 2007. Of these, 63% of the Iowa worker fatalities were 45 years of age or older compared to 52% of all USA workers. The data gap was slightly closer in 2008 for Iowa workers 35 years or older at 83% compared to 75% USA workers, but the discrepancy increased to a 16% difference for workers 45 years of age or older in Iowa (69%) compared to the USA worker data (53%). 2009 CFOI data analysis and Iowa FACE data are still being finalized.

Iowa Work-Related Traumatic Fatalities (WRTF) by Percentage of Workers in Age Range at time of Incident Compared to USA CFSI 2007 & 2008 Data

	IA 2007: WRTF Cumulative Percentage (N=89)	USA 2007: WRTF Cumulative Percentage (N=5657)	IA 2008: WRTF Cumulative Percentage (N=93)	USA 2008: WRTF Cumulative Percentage (N=5071)
65 years +	13	10	17	11
55-64 years	35	27	38	29
45-53 years	63	52	69	53
35 – 44 years	85	72	83	75
25 – 34 years	92	90	92	91
20-24 years	96	98	98	98
16-19 years	96	99	98	100
< 16 years	96	100	98	100
Age Unknown	100	100	100	100
Cumulative Percentage	100%	100%	100%	100%

Data Source: U.S. Department of Labor, Bureau of Labor Statistics, Census of Fatal Occupational Injuries

IDPH OHSSP continues to network with other stakeholders to raise awareness regarding these findings and to develop effective programming to address the specific areas identified by surveillance. Significant relationships and programming or projects where IDPH OHSSP has actively been involved in the past year include:

- IDPH Center for Acute Disease Epidemiology (CADE)
 1. Collaboration throughout the year to provide technical support and surveillance expertise for CADE investigations involving occupational exposures of infectious disease.
 2. Revision of Iowa Administrative Code for environmental and occupational mandatory reporting language; revision of the reportable conditions chart for use by medical provider.
 3. Inclusion of injury reporting (agriculturally related injury, traumatic brain injury, and traumatic spinal cord injury reporting) for the first time in this portion of the Iowa Administration Code.
- Iowa's Center for Agricultural Safety and Health (I-CASH) Surveillance Committee Chair, Rural Roadway Safety report and awareness projects.
- Great Plains Center for Agricultural Health: Agricultural Health training for medical providers, agricultural injury surveillance.
- IDPH Rural Health Access and Primary Care: Ag injury surveillance promotion, injury coding awareness, and data access and completeness.
- IDPH development of a Children's Safety Network National Community of Practice Team involving members from various IDPH programs for rural injury prevention.
- WorkSafe Iowa (occupational health clinicians and clinics) – presentation and collaboration for surveillance and reporting of mandatory conditions.
- America Lung Association -IA and Iowa Asthma Coalition: IDPH data analysis of BRFSS call back data for adult work-related asthma and participation of Iowa state asthma plan development.

- IDPH OHSSP development of a IDPH Respiratory Protection Plan feasibility study for use with various IDPH programs and the IDPH departmental Respiratory Protection Plan and Policy documents.
- AgriSafe Network, Farm Safety 4 Just Kids (FS4JK), and National Education Center for Agricultural Safety (NECAS): Worker safety resources and training materials, rural safety materials and resources for rural families
- IDPH Iowa Disease Surveillance System (IDSS) expansion to include environmental data reporting capabilities team members.
- IDPH Fit for Life surveillance advisory team participation.
- Safeguard Iowa – Iowa business sector promotion for worker safety during H1N1 influenza outbreak and issues regarding worker safety for during flooding and natural disasters – also in conjunction with CDC NCEH and IA EHRT.
- 2010 Farm Progress Show – Health & Safety Tent coordination.
- CSTE - participation in annual meeting workshop planning, recruitment of speakers, abstract review for sessions for occupational health, moderator at conference, and last-minute speaker for ABLES session.
- GoToMeeting/Webinar capability established and used by IDPH OHSSP for various surveillance and research to practice (R2P) needs.

Pesticide Poisoning Surveillance Program (PPSP)

A milestone for the Iowa PPSP program was the hiring of a surveillance coordinator in June of 2009. This allowed Iowa to complete several surveillance reports and complete data requirements that were lacking due to the position vacancy. Iowa continues to evaluate and improve its surveillance methodology by building capacity and developing better relationships with stakeholders in the state and country. Iowa PPSP has worked with the Iowa Poison Control Center to provide better reports and the results have been more reliable and more data than years past. Iowa also had several high priority cases to investigate, such as child giving rodenticide to fellow students, large chemical gas exposure at a milk processing plant due to mixing of incompatible chemicals, and an occupational death that included the release of an industrial chemical. Iowa also investigated 10 airplane crashes in the summer of 2009, with 8 being crop dusters. With the increase in use of aerial application of pyraclostrobin, and other pesticides, Iowa is seeing a larger number of reports each year. Iowa works with the Iowa Department of Agriculture and Land Stewardship (IDALS) on many pesticide cases as they investigate possible label violations.

The data for calendar year 2008 cases of occupational pesticide poisoning have been entered in SPIDER. There were 99 known occupational cases. Of these cases, 30 are classified as definitive cases, 3 are probable cases, and 24 possible cases. An additional 5 cases were suspicious, and 35 have not been classified due to insufficient information. Disinfectants continue to be the most common pesticide exposure and are most frequently associated with cases of occupational pesticide poisoning. The pesticide data for 2009 are being analyzed.

FACE Program

Under a subcontract with the Iowa Department of Public Health, the Iowa FACE Program is located within Department of Occupational and Environmental Health, an academic environment characterized by interdisciplinary, collaborative research. Dr. Craig Zwerling, FACE Program Principal Investigator, is the Department's Chair with over thirty years experience as an occupational physician and researcher. John Lundell, FACE Program Co-PI, is Deputy Director of the University of Iowa Injury Prevention Research Center and brings

substantial experience in transportation-related safety and public policy issues. Lundell served two terms as chair of the NIOSH-State FACE Consortium Coordinating Committee. Mr. Murray Madsen is the Iowa FACE Program's Chief Trauma Investigator. Mr. Madsen worked as a product safety engineer for Deere and Company prior to joining the Iowa FACE Program. Newly recruited OEH faculty member Dr. T. Renée Anthony is a Certified Industrial Hygienist (CIH) and Certified Safety Professional (CSP) who will be joining the Iowa FACE investigative team.

The Iowa FACE Program has established a vibrant, collaborative working relationship with the Iowa Office of the State Medical Examiner (IOSME). This unique close relationship between a FACE Program and the State Medical Examiner is a strength of our Iowa Program. Mr. John Kraemer, Director of Forensic Operations, is a member of the Iowa FACE Program team and is supported through the NIOSH FACE grant. The SME Office immediately alerts us when they learn of possible incidents of interest to the FACE Program and promptly forwards ME-1 reports of all occupational traumatic deaths. The Iowa FACE Program now receives ME-1 reports on approximately 90% of all identified traumatic occupational fatalities and autopsies on over 70% of the cases. These reports and autopsies provide the Iowa FACE Program access to valuable victim information for case reports and investigations. Because of our formal relationship with the IOSME, they are able to provide the FACE Program access to otherwise confidential information. In return, we provide them lists of occupational fatalities that we have identified from other sources.

The Iowa FACE Program has had a longstanding, collaborative relationship with the Iowa Occupational Safety and Health Program. The FACE Program and IOSH staffs frequently share information on cases of mutual interest. Draft FACE investigative reports involving incidents that IOSH also investigated are shared to ensure the information and recommendations are consistent between the two agencies. The FACE Program shares our list of fatalities with the IOSH Office to ensure they are aware of all our cases that might be of interest to them. The Iowa Office of the Bureau of Labor Statistics Census of Fatal Occupational Incidents (CFOI) Program is located within the Iowa Division of Labor Services. We have nurtured an excellent working relationship with Ms. Anne Jackson in the Iowa CFOI Program where we share lists of new fatal occupational incidents on a quarterly basis.

As part of the Iowa FACE Program ongoing quality assurance and evaluation process the number of days are tracked between the death of the victim and the first notification of the FACE Program. For 399 fatal incidents over the previous 4+ years, the median has been 3 days and the mode one day. We believe this demonstrates the comprehensive and established nature of our surveillance system.

The source of the initial fatality notification to the Iowa FACE Program is also tracked for each fatality. Nearly 25% of the notifications come from the State Medical Examiner and Iowa OSHA, which demonstrates the close working relationship we have established with these important partners.

Using the NIOSH FACE investigative model, the Iowa FACE Program has completed 19 full investigations from 2006 through June 2009 with several more in development. To select specific incidents for full investigations, we use the NIOSH-established "targets" along with cases of particular interest to Iowa. Since workers in the agricultural industry represent a significant number of the occupational fatalities in Iowa, we have chosen to place special emphasis on that industry for our investigative reporting.

The Iowa FACE Program emphasizes the dissemination of information resulting from our surveillance and investigation activities. This emphasis is consistent with the philosophy adopted by all programs within the OEH Department that all programs should be based in good science and that science should be translated into effective interventions and programs. The Iowa FACE Program utilizes numerous methods and avenues for developing and disseminating recommendations aimed at preventing fatal occupational injuries. These methods include presentations at various meetings, scientific publications, distribution of media releases, dissemination of printed materials, publication in trade-specific magazines and newsletters, and maintenance of an extensive FACE website.

We believe a unique strength of the Iowa FACE Program is our broad-based dissemination efforts including newsletters and our innovative focus on publishing investigations and prevention recommendations in trade-specific publications. For instance in 2008 the *Successful Farming* magazine printed a three part-story on agricultural injuries highlighting Iowa FACE Program statistics and recommendations.

The Iowa FACE Program maintains one of the most comprehensive, useful, and innovative FACE Program websites (www.public-health.uiowa.edu/FACE). Helpful and unique aspects of the website include:

- Listing by year from 1995 to the present of every traumatic injury occupational fatality identified by the Iowa FACE Program. Each of the 1,120 fatality listings contains the FACE ID#, date, industry codes, E-Code, job title, and a brief description of the event.
- All Iowa FACE Program full investigation reports with prevention recommendations completed since 1995. These reports are listed both chronologically and by “key pictures” similar to a keyword type listing.
- An interactive Google map of all Iowa traumatic occupational deaths in 2006 (79 fatalities) and 2007 (89 fatalities). This useful feature allows you to scan down a list of brief incident descriptions, click on the case of interest, and up pops a “balloon” on the map of Iowa identifying the incident’s approximate location and providing additional information. Alternatively, the user can click on any of the “thumbtacks” on the map to see additional information. This information is useful to see the geographic dispersion/clustering of fatal incidents and is particularly useful for regional agencies to see incidents that occurred in their jurisdiction.